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CENTER ROUTING SLIP

FROM	DATE
NPIC/TSSG/ESD/TEB	25 Oct 68

TO		INITIALS	DATE	REMARKS
DIRECTOR				NPIC/DED [redacted] Room 5-S468
DEP/DIRECTOR				
EXEC/DIRECTOR				
SPECIAL ASST				
ASST TO DIR				
ASST TO DEP/DIR				
CH/PPBS				
DEP CH/PPBS				
EO/PPBS				
[redacted]				
CH/IEG				
DEP CH/IEG				
EO/IEG				
				Declass Review by NGA.
CH/PSG				
DEP CH/PSG				
EO/PSG				
CH/DBD/PSG				
CH/TSSG	X	JWC		
DEP [redacted] TSSG				
EO/TSSG				
DIR/IAS/DDI				
CH/DIA/XX4				
CH/DIA/AP-1P				
CH/SPAD				

25X1

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IP FM 30 (1-68) DESTROY PREVIOUS EDITIONS

SECRET
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28 OCT 1968

MEMORANDUM FOR: Development & Engineering Division, TSSG

25X1 ATTENTION: [redacted]

SUBJECT: Test Plan for Rapid Alignment Device for Micro-stereoscope

1. The attached test plan is forwarded for your information and planning purposes. Your comments concerning the plan will be welcomed in the realization that a thorough and effective test program cannot be achieved without participation and coordination with both the Development Engineering Division and operational components.

2. The tentative arrival date for this device is 28 October 1968. The testing program described herein is scheduled to begin shortly thereafter and to require approximately two months for completion.

25X1 [redacted]

Chief, Technical Services & Support Group
NPIC

Attachment: a/s

25X1 cc: NPIC/IEG (A[redacted]
IAS (Attn: [redacted]

Distribution:
Orig. -- Addressee

GROUP 1
Excluded from automa... downgrading and declassification

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22 October 1968

TEST PLAN

RAPID ALIGNMENT DEVICE FOR MICROSTEREOSCOPE

25X1 REFERENCE: [redacted] Dated 11 March 1968, and
ammendments thereto, with [redacted] 25X1
25X1 [redacted]

1. INTRODUCTION

1.1. The rapid alignment device (RAD) is an optical instrument intended to make the accomplishment of stereo fusion easier and faster when using a microstereoscope, especially if it is equipped with anamorphic eyepieces.

1.2. The RAD will mount upon the viewing end of the anamorphic eyepieces and provide for superposing the left and right images. The two images will be viewed through a monocular eyepiece, thereby permitting the operator to observe the relative effect of each individual positioning adjustment. When proper superposition has been achieved the device will have served its function and will be moved from the microstereoscope.

1.3. The development of this prototype has been closely followed by the Test and Evaluation Branch, Engineering Support Division (TEB/ESD). This test plan describes in general terms a testing program which, except for the pre-acceptance tests, this branch proposes to accomplish. The device is expected by the end of October 1968. The testing program is expected to be completed two months later.

2. PRE-ACCEPTANCE TESTS

2.1. Pre-acceptance testing will be conducted by the contractor at his facility. The tests to be performed have been approved by the DED project officer. A document containing the results of the tests is to accompany the instrument when it is shipped.

GROUP 1
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3. ACCEPTANCE TESTS

3.1. An acceptance test procedure will be designed and performed by TEB at NPIC. The object will be to determine the degree of success, or failure, attained by the contractor in meeting the minimum development objectives and specifications as required by the contract.

3.2. The results of this acceptance test phase will be made available to DED in a timely written interim report. It is intended that this report will provide guidance to DED in deciding on appropriate final contractual action.

4. PERFORMANCE AND ENGINEERING TESTS

4.1. If the rapid alignment device passes the acceptance tests it will then be subjected to a testing procedure to determine its maximum performance capability and to accomplish a thorough engineering evaluation.

4.2. The initial objective of this testing phase will be to determine if the device is capable of accomplishing its intended purpose--to reduce the time required to attain alignment of a microstereoscope assembly for stereo viewing. It is anticipated at this time that this will be accomplished by recruiting a number of competent people and to conduct an objective test to determine the average times required to accomplish alignment for stereo fusion, both with and without the use of the device. Additional performance criteria to be tested include mechanical stability of the assembly, ease of performing alignment adjustments, optical transmission and distortion characteristics, etc.

4.3. The engineering analysis will consider the design configuration, materials of construction, reliability, maintainability and human factors. In addition, all other delivered items such as special tools, spare parts, instruction manuals, drawings and carrying case will be evaluated.

4.4. The purpose of the engineering test phase is threefold. First, it will yield a technical evaluation of the prototype which may provide guidance to the operator regarding the instrument's capabilities.

4.5. A second objective is to provide authoritative data for use in the preparation of specifications if additional procurement is contemplated.

4.6. A final objective of this testing phase is to cause the withholding of delivery to an operating division of a prototype which is unsuitable from an engineering viewpoint. The device may pass the acceptance tests and still not be suitable for operational use without modification or re-building. If this situation should occur both the DED and the interested operating division will be consulted by TEB/ESD to decide on the most appropriate course of action.

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5. OPERATIONAL SUITABILITY TEST

5.1. The purpose of this test will be to determine the suitability of the device for use in an operational environment. The environment can only be complete if the testing is performed by regular operational personnel.

5.2. It is planned to submit the rapid alignment device to both major operating divisions, IEG and IAS, for a period of one week each. They will be provided with all available instructions as to its purpose and usage. They will be asked to submit a written evaluation report to TEB/ESD within a week after the conclusion of their testing period.

6. TEST AND EVALUATION REPORT

Upon completion of the testing program described herein an overall test and evaluation report will be produced. The report will contain details of all testing performed and will contain conclusions and recommendations by TEB/ESD. It is planned to distribute this report to all operating components within NPIC, to EXRAND committee members and to other qualified components upon request.

7. EQUIPMENT REQUIRED

The following items of NPIC equipment will be needed by TEB in order to accomplish these tests. It is expected that the DED will assist in making them available:

25X1 1-set [redacted] Mod I Anamorphic Eyepieces
1-set [redacted] Mod II Anamorphic Eyepieces
25X1 1-set [redacted] Anamorphic Eyepieces
1-set 1.3X Wide Field Objectives
25X1 1 [redacted] Zoom 70 Stereoscope
1 [redacted] High-Power Stereoviewer
2-Optics Kits (one for each microscope) to include [redacted] 10X W.F. eye- 25X1
25X1 pieces, [redacted] 6X Comp. eyepieces and [redacted] 10X Comp. W.F. high eyepoint 25X1
eyepieces.

25X1

[redacted]

Ch/TEB/ESD/TSSG

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